

67



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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/607,890	06/30/2000	Klaus T. Reichel	4100-194	1213

7590 05/19/2003

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EXAMINER

WILLIAMS, KEVIN D

ART UNIT PAPER NUMBER

2854

DATE MAILED: 05/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/607,890

Applicant(s)

REICHEL, KLAUS T.

Examiner

Kevin D. Williams

Art Unit

2854

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5,7 and 8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5,7 and 8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Toyoda (US 5,740,736) in view of Ghosh (US 5,925,496) and Applicant's admitted prior art (AAPA).

Toyoda teaches a printing unit cylinder comprising a body having a barrel 1 as a centerpiece and two journals (Fig. 1), a respective one of the journals being on each side of the barrel. Toyoda also discusses the problems that arise from thermal expansion of the barrel (col. 1, lines 35-38). Toyoda does not provide a discussion of the particular material from which the cylinder is made and therefore does not disclose the cylinder being made of, or the barrel being made completely of a metallic material having a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°. Toyoda also does not disclose an iron alloy having about 36% nickel by weight.

Ghosh teaches several metallic materials that are advantageous in producing printing cylinders and that the cylinder can be composed of one or more of the metals including iron and nickel (col. 7, lines 57-61).

Applicant's admitted prior art (pg. 7, lines 1-14) discloses a known metallic material comprising iron and nickel that comprises an iron alloy having about 36% nickel by weight and having a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Toyoda in view of Ghosh and AAPA to have the entire cylinder of Toyoda be made of the material disclosed in AAPA, in order to avoid exceedingly high printing pressures as discussed by Toyoda.

Response to Arguments

3. Applicant's arguments filed 2/21/2003 have been fully considered but they are not persuasive.

Applicant argues that Ghosh does not teach the specific steel/nickel alloy of applicant's invention because the steel disclosed in Ghosh does not contain more than 29% nickel. The examiner does not rely on Ghosh for the teaching of the specific steel/nickel alloy. The examiner relies on Ghosh for his teaching that cylinders are commonly made from various combinations of metals, including combinations of iron and nickel. See column 7, lines 56-62.

Applicant discloses a cylinder being made of a metallic material having a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°. Applicant further discloses that the material is an iron alloy having 36% nickel by weight. Applicant admits that the material is a known material. A material

which is known under the trademark INVAR is also an iron alloy having 36% nickel by weight and has a linear coefficient of expansion of about $\alpha < 1.5 \times 10^{-6} \text{ K}^{-1}$ in a temperature range of from 20° to about 60°. INVAR is best known and commonly used for its low linear coefficient of thermal expansion.

Toyoda discusses the problem of thermal expansion in printing cylinders. Ghosh discloses that printing cylinders are commonly made from combinations of iron and nickel. It would be obvious to remedy the problem in Toyoda by constructing the cylinder of a known material that is made of a combination of iron and nickel and is known for its extremely low linear coefficient of thermal expansion.

Conclusion

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2854


the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin D. Williams whose telephone number is (703) 305-3036. The examiner can normally be reached on Monday - Friday, 8:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (703) 305-6619. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

KDW
May 12, 2003



ANDREW H. HIRSHFELD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800